

Skagit County Fire Protection District 13

“Professionally Staffed by Volunteers”



P.O. Box 1007
17433 Snee-Oosh Road
La Conner, Washington 98257
Ph: (306)466-1224 Fax: (306)466-0526

03/15/2022

Director Todd Mitchell
Swinomish Department of Environmental Protection
11430 Moorage Way
La Conner, WA 98257

RE: Air Quality Monitoring Outreach Partnership

Dear Todd Mitchell:

I am excited to partner with the Swinomish Air Quality Program on their project to enhance air pollution monitoring on the Swinomish Reservation entitled “Enhancing Swinomish Air Quality Monitoring of SO₂ and H₂S and Community Response & Engagement to Hazardous Gas Releases.”

After experiencing the 2015 and 2020 release events, District 13 believes that a better monitoring system needs to be locally in place. So often after previous releases the portable monitoring begins in our area sometimes hours after the initial event. With a system in place monitoring would be immediate and ongoing. Our district believes that the best way to protect our community members is to increase air quality monitoring and to expand the ability to disseminate crucial information to emergency response personnel. We support Swinomish Indian Tribal Community’s expansion of their AQ monitoring program to include real-time monitoring of SO₂, H₂S, with PM_{2.5}, NO/NO₂, and O₃. We are committed to assisting in the planning and development of how to distribute critical information in a time of an air quality or weather-related emergency.

The emergency personnel at Skagit Fire District 13 that respond to large hazardous gaseous/liquid/solid spill events will support development of a tailored emergency responders website in the following ways:

1. Assist in soliciting needs of emergency responders within our organization
2. Assist in beta-testing the emergency responder website by such responders
3. Assist in training emergency responder staff on the use of the website

In addition to building resiliency to respond to hazardous spills from the nearby oil refineries, the website will be useful to see real-time weather conditions which greatly impact other emergencies such as large fires like the multi-boat fire that occurred in the Shelter Bay Marina in 2014 and a spill that was detected on Snee-Oosh Beach area last year. In addition, we could have benefitted during the many multiple wildland fires we experienced last year by having local wind speed and direction available.

Thank you for your consideration of this important proposal. If you have any questions, please contact Kelsey Larson (248-550-3974).

Respectfully,

Chief Wood Weiss

Skagit Fire Dist. 13
360.941.5607
Chief@skagitfire13.net

Kelsey E Larson

Ex. 6 Personal Privacy (PP)

EDUCATION

University of Washington

M.S. in Atmospheric Science

Seattle, WA

August 2018

- **Thesis:** “Investigating the Sources of Anthropogenic Wintertime Pollutants in the northeast United States with a Lagrangian Dispersion Model”
- Relevant coursework: Atmospheric Chemistry, Atmospheric Aerosols and Heterogeneous Chemistry

Valparaiso University

B.S. in Chemistry & Physics, GPA: 3.98/4.0, Minor: Math

Valparaiso, IN

June 2015

- Relevant coursework: Quantitative Analysis, Data Reduction, Organic Chemistry, Physical Chemistry, Quantum Physics
- Awards/Honors: Distinguished Student Award, Lumina Award, Sigma Pi Sigma, Phi Lambda Upsilon, Alpha Lambda Delta, Christ College Associate (Humanities Interdisciplinary Honors College), Bette J. Galow Memorial Scholarship

EXPERIENCE

Swinomish Indian Tribal Community

Air Quality Specialist

La Conner, WA

August 2018 - present

- Maintain, repair, modify, and calibrate CAPs monitors (Ozone and NO_x) and weather monitors
- Sample and document chain of custody logs for Canister samples for external analysis using the EPA TO-15 method
- Develop data management, organization, and QA/QC procedures
- Keep detailed eLogbooks of all maintenance, sampling, and calibration procedures
- Develop, write, and implement SOPs for CAPs, HAPs, and weather monitoring instruments
- Oversight of Air Quality Program Staff
- Write, manage, and report on federal grants or other external funding sources for the enforcement of the CAA, reduce diesel engine emissions, and study indoor air quality.
- Assist in responding to COVID-19 by recommending best filtration practices and planning placement of stand-alone HEPA filters in Swinomish government buildings
- Develop and manage AQ program budgets including annual costs, station renovations, and new station builds.

University of Washington

Research Assistant

Seattle, WA

July 2015 – December 2016 and April 2016 – August 2018

- Used FLEXPART (Lagrangian particle transport model) to determine sources and time since emission of NO_x, SO₂, CO, and HCHO for the 2015 NSF Wintertime Investigation of Transport, Emissions, and Reactivity (WINTER) campaign
- Analyze large and complex datasets of air composition samples to determine model accuracy, precision, and limitations
- Developed software (perl) to reduce computational time and automate calculations; develop software (IDL, python) to analyze observations and model output; Include photochemical reactions to investigate secondary production.
- Write sections and develop figures for fellowship/grant proposals
- Worked with other research groups to utilize trajectories in the determination of chemical lifetime of NO_y

Teaching Assistant

January 2016 – March 2016 and March 2017 – August 2018

- Develop activities for one-hour class once a week, write quizzes, homework, and tests, proctor and grade quiz/test
- Be available to answer student questions and concerns, hold office hours, attend class to support professor

Valparaiso University

Research Assistant (Tropospheric Ozone Pollution Project, Summer Research Experience)

Valparaiso, IN

May 2013 – May 2015

- Developed detailed inventory of scientific equipment; Document procedure for expansion to multiple research labs
- Calibrate and launch electrochemical cell instrument; Forecast plume location for balloon launches in San Jose
- Develop software (IDL) to analyze Ozone and Sulfur Dioxide measurements; automating creation of calibration reports
- Present progress at weekly meeting, teleconferences, and public talks

AWARDS

Tribal Air Grantee Excellence Award

Swinomish Indian Tribal Community, Kelsey Larson, Caitlin Roberts, Caanan Cowles (previously Scott Andrews)

- Persevering through staff changes, monitoring equipment failure, and COVID-19 closures to deliver thorough grant package
- Piloting EPA R10's Budget and Checklist tool for CAA 105 grant applications

PROFESSIONAL DEVELOPEMENT

2019-present

- Swinomish Grant Writing Training – Native Learning Center (2018)
- QAPP Writing – Institute for Tribal Environmental Professionals Online Courses (2019)
- 24 Hour HAZWOPER Training – Washington Department of the Environment (2019), OSHA Online (2021)
- Indoor Air Quality Training – Tribal Healthy Homes Network, Aileen Gagney (2020)

PUBLICATIONS

- Larson, K., Clark A., Appel, A., Dai, Q., He, H., Zygmunt, S. (2015) Surface-Dependence of Interfacial Binding Strength between Zinc Oxide and Graphene, *RSC Adv.*, 5, 65719-65724
- Schroder, J. C., Campuzano-Jost, P., Day, D. A., Shah, V., Larson, K., Sommers, J. M. Sullivan, A. P. Campos, T., Reeves, M. Hills, A. Hornbrook, R., Blake, N., Scheuer, E., Guo, H., McDuffie, E., Fibiger, D., Hayes, P. L., Weber, R.J., Dibb, J.E., Apel, E., Jaegle, L., Brown, S. S., Thornton, J., Jimenez, J. L. (2018) Sources and Secondary Production of Organic Aerosols in the Northeastern US during WINTER, *JGR*, 123, 14, 7771-7796
- Larson, K. (2018) Investigating the Sources of Anthropogenic Wintertime Pollutants in the northeast United States with a Lagrangian Dispersion Model, UW Master Thesis.

CONFERENCE PRESENTATIONS

2017

- Using Lagrangian and Eulerian frameworks to analyse Anthropogenic Emissions during the WINTER aircraft campaign, poster at IGC8 (8th International GEOS-Chem Meeting), Boston, MA

2015

- Investigation Sulfur Dioxide Transportation in San Jose Costa Rica, poster at CUWiP (Conference for Undergraduate Women in Physics), Purdue, IN

2014

- Host-guest nanomaterials: A comparison of Brooker's merocyanine interactions with modified β -cyclodextrins (co-author on poster), ACS Fall National Meeting, San Francisco, CA
- Profiling the SO₂ Plume from Volcan Turrialba: Ticosonde Balloon Measurements Compared with OMI and OMPS Retrievals (co-author on poster), AGU Fall Meeting, San Francisco, CA
- Investigation of Sulfur Dioxide Dispersion in San Jose Costa Rica, Valparaiso Fall Interdisciplinary Research Symposium, Oral Presentation

2013

- Investigation of Sulfur Dioxide Concentrations in the Valparaiso Area, Valparaiso Fall Interdisciplinary Research Symposium, Oral Presentation
-

Attachment 2: Quality Assurance Statement

SITC currently has two QAPPs on file with the EPA – one that combines NAAQS and weather (2012) and another for discrete monitoring of HAPs (2021). We anticipate an updated weather observation (WX) QAPP to be in review by quarter 3 of 2022 and a separate NAAQS enforcement of O₃ and NO/NO₂/NO_x QAPP to be in review by the end of 2022 if not early 2023. SITC is well aware that a QAPP must be on file before data can be collected for monitoring purposes. Thus, SITC will create a non-NAAQS enforcement QAPP for continuous monitoring of SO₂, H₂S, and PM_{2.5} before the website is advertised for use by the community or emergency responders.

Personnel

The following sections list the functions, experience, and authority within Swinomish Indian Tribal Community (SITC)'s Department of Environmental Protection (DEP):

Water Resource Manager, Nicole Casper: Direct oversight of AQ Program and ensuring that all personnel involved in this program have access to training, equipment, and contract support needed to fulfill data collection and QA/QC needs. Mrs. Casper has been the Water Resource Manager overseeing the WQ program for 7 years including the WQ program's data collection, data QA/QC, and data management. Mrs. Casper directly reports to the DEP Director, Todd Mitchell.

Air Quality Specialist (AQSp), Kelsey Larson: In general, the AQSp is responsible for QA/QC oversight, data management, and oversight of data collection. This includes, but is not limited to: Writing and revising all QAPP, SOPs, and all supporting documents, conducting or participating in QA activities, determining necessary corrective actions, preparing and delivering data completeness and summary reports. Ms. Larson started in 2018 after obtaining her Master's in Atmospheric Science from the University of Washington (CV attached as Attachment 3). Since coming to Swinomish, Ms. Larson has completed an internal audit of SITC's AQ program and instituted changes like: automating Zero/Span checks to occur at night with minimal data loss, increasing checks on weather instruments, and moving toward electronic record keeping and building QA/QC'd databases. Ms. Larson generally is the day-to-day oversight of the AQ program and reports to Mrs. Casper.

Air Quality Technicians (AQT), Caitlin Roberts and Julian Silva: In general, the AQT is responsible for data collection and data entry. This includes, but is not limited to: Carrying out the work in the field and ensuring the gathered data meet QA/QC requirements, verifying that all required site visits, maintenance, and routine QC checks are performed and documented, and ensuring measurement quality standards are met. Caitlin will also (AQT 2) support AQSp to write and revise QAPP and SOPs. Caitlin has been with the AQ program since 2019 and runs our discrete HAPs sampling program. Julian Silva is a recent hire who is currently in training by reviewing SITC SOPs for HAPs and WX data collection. Both AQT 2 and AQT 1 report to the AQSp.

QA Data Reviewers, Shannon B. Stewart: In general, the QA Data Reviewer acts as an outside check to ensure the AQ program is following documented QA/QC procedures. Shannon is currently the head of the Near Shore and WQ data collection and thus in charge of QA/QC for DEP's other data collection programs. SITC would like to use ITEP's QREST database to partner with other AQ Tribes to take on the role of QA Data Reviewer to ensure the auditor is outside Swinomish DEP – especially since the recent move to the Environmental Science division of DEP has reduced the degrees of management separation

between Mrs. Stewart and Ms. Larson from two (2) to one (1) as Mrs. Stewart also reports to Mrs. Casper.

Criteria

Swinomish Air Quality Program understands that the sulfur monitor (450iQ) and the particulate monitor (5030i) that are the primary focus of this project cannot be regulatory of the NAAQS due to either not being an FRM/FEM (450iQ) or not having a collocated FRM (5030i). The acceptance criteria to ensure precision and accuracy for the relevant parameters are listed below:

Parameter	Interval	Acceptance Criteria
Temperature	1/month	QC Check: $\pm 0.5^{\circ}\text{C}$
	1/quarter	Verification: $\pm 0.5^{\circ}\text{C}$ per point (3 points)
RH	1/month	QC Check: $\pm 7\%$ RH
	1/quarter	Verification: $\pm 7\%$ RH per point (4 points)
H₂S	1/3 days	QA Check: absolute bias of 10%
	1/3 days	Zero/Span Check: CV of 10%
SO₂	1/3 days	QA Check: absolute bias of 10%
	1/3 days	Zero/Span Check: CV of 10% (match 40 CFR Appendix A to Part 58 Section 2.3.1.5)
PM_{2.5}	1/week	QA Check: ± 10 percent for total bias
	1/week	Zero/Span Check: CV of 10 percent (match 40 CFR Appendix A to Part 58 Section 2.3.1.1)
	1/14 days	Flow Check: $< + 4.1\%$ of transfer standard $< + 5.1\%$ of flow rate design value

To add to the above criteria, SITC will ensure that all standards – be they protocol gases, mass flow meters, photometers, or tiny weights to check the propeller torque on the anemometers – will be traceable to a NIST standard or equivalent standard. SITC will complete an external audit on all instruments once a year by contracting with AMS.

For representativeness, SITC is targeting two locations for gaseous and particulate monitors that are both on a neighborhood scale. SAQMS1 includes the Title V sources within 4 km, Hwy 20 within 0.5 km, and train tracks within 100 meters and is more source oriented. SAQMS5 will include the most densely populated region of the Reservation within 4 km radius and thus be more oriented to public health impacts.

For completeness, the DAS we will be developing for the stations will minimize data loss by having the QA, Zero/Span, and Multipoint checks take less than 15 minutes in an hour interval (i.e. run check on one instrument from 2:45 – 3:15 am, another from 4:45 – 5:15 am, etc.) allowing for data completeness for one (1) hour data intervals. For weather and PM_{2.5} for which their QA/QC checks are manual and will be scheduled out to fit these requirements as well.

For comparability, we'd prefer to be as close, if not identical to, the Federally mandated or recommended critical, operational, and systematic criteria for SO₂ and PM_{2.5} as we feasibly can. For weather data, SITC has recently a higher interval for checking weather monitors than the EPA recommends for SLAMs but uses the same acceptance, operational, and systematic criteria.

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. DUNS No.

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☐ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☐ Yes ☐ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

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- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.

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For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Kelsey E Larson

B. Title of Authorized Official

Air Quality Specialist

C. Date

03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

Delete Mandatory Other Attachment

View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

Delete Optional Other Attachment

View Optional Other Attachment

Project Narrative File(s)

* Mandatory Project Narrative File Filename:

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File

Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

Washington

8. APPLICANT INFORMATION:

* a. Legal Name:

Swinomish Indian Tribal Community

* b. Employer/Taxpayer Identification Number (EIN/TIN):

91-0434170

* c. Organizational DUNS:

0792561940000

d. Address:

* Street1:

Administration Building

Street2:

11404 Moorage Way

* City:

La Conner

County/Parish:

Skagit

* State:

WA: Washington

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

98257-9450

e. Organizational Unit:

Department Name:

Dept. Environmental Protection

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Ms.

* First Name:

Kelsey

Middle Name:

* Last Name:

Larson

Suffix:

Title:

Air Quality Specialist

Organizational Affiliation:

Swinomish Indian Tribal Community

* Telephone Number:

2485503974

Fax Number:

* Email:

klarson@swinomish.nsn.us

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

I: Indian/Native American Tribal Government (Federally Recognized)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Enhancing Swinomish Air Quality Monitoring of SO2 and H2S and Community Response & Engagement to
Hazardous Gas Releases

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="304,077.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="304,077.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name:	Prefix: Mr.	First Name: Steve	Middle Name:
	Last Name: Edwards	Suffix:	
Title:	Senate Chairman		
Complete Address:			
Street1:	11404 Moorage Way		
Street2:			
City:	La Conner	State:	WA: Washington
Zip / Postal Code:	98257	Country:	USA: UNITED STATES
Phone Number:	360-466-7205	Fax Number:	
E-mail Address:	sedwards@swinomish.nsn.us		

Payee: *Individual authorized to accept payments.*

Name:	Prefix: Mrs.	First Name: Nicole	Middle Name:
	Last Name: Lewis	Suffix:	
Title:	CFO		
Complete Address:			
Street1:	11406 Moorage Way		
Street2:			
City:	La Conner	State:	WA: Washington
Zip / Postal Code:	98257	Country:	USA: UNITED STATES
Phone Number:	360-466-7204	Fax Number:	
E-mail Address:	nlewis@swinomish.nsn.us		

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name:	Prefix: Mrs.	First Name: Arlene	Middle Name: Dilts
	Last Name: Jackson	Suffix:	
Title:	Grants Administrator		
Complete Address:			
Street1:	14404 Moorage Way		
Street2:			
City:	La Conner	State:	WA: Washington
Zip / Postal Code:	98257	Country:	USA: UNITED STATES
Phone Number:	360-391-9151	Fax Number:	
E-mail Address:	adiltsjackson@swinomish.nsn.us		

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: **Prefix:** **First Name:** **Middle Name:**

Last Name: **Suffix:**

Title:

Complete Address:

Street1:

Street2:

City:

State:

Zip / Postal Code:

Country:

Phone Number:

Fax Number:

E-mail Address:

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. ARP AQM		\$	\$	304,077.00	\$	304,077.00
2.						
3.						
4.						
5. Totals		\$	\$	304,077.00	\$	304,077.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	ARP AQM				
a. Personnel	\$ 118,869.00	\$	\$	\$	\$ 118,869.00
b. Fringe Benefits	49,568.00				49,568.00
c. Travel	0.00				0.00
d. Equipment	23,000.00				23,000.00
e. Supplies	18,525.00				18,525.00
f. Contractual	44,005.00				44,005.00
g. Construction	0.00				0.00
h. Other	0.00				0.00
i. Total Direct Charges (sum of 6a-6h)	253,967.00				\$ 253,967.00
j. Indirect Charges	50,110.00				\$ 50,110.00
k. TOTALS (sum of 6i and 6j)	\$ 304,077.00	\$	\$	\$	\$ 304,077.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8.	ARP AQM	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 112,231.00	\$ 28,058.00	\$ 28,058.00	\$ 28,058.00	\$ 28,057.00
14. Non-Federal	\$				
15. TOTAL (sum of lines 13 and 14)	\$ 112,231.00	\$ 28,058.00	\$ 28,058.00	\$ 28,058.00	\$ 28,057.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program		FUTURE FUNDING PERIODS (YEARS)			
		(b)First	(c) Second	(d) Third	(e) Fourth
16.	ARP AQM	\$ 112,231.00	\$ 94,830.00	\$ 97,016.00	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16 - 19)		\$ 112,231.00	\$ 94,830.00	\$ 97,016.00	\$

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges:	22. Indirect Charges:
23. Remarks:	

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Manifest for Grant Application # GRANT13580475

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 25130 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16021 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24217 bytes)

3. Form SF424A-V1.0.pdf (size 22740 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22527 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 16003 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37303 bytes)

Attachments Included in Zip File (total 5):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-ATTACHMENT1_FD13LetterOfSupportARP.pdf application/pdf (size 377294 bytes)

2. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1238-Swinomish_ARP_Narrative.pdf application/pdf (size 1653048 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-ATTACHMENT3_CV_KEL.pdf application/pdf (size 137972 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1234-ATTACHMENT2_QAstatement.pdf application/pdf (size 535176 bytes)

5. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-ATTACHMENT4_2022_IDCrate.pdf application/pdf (size 288315 bytes)



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

Indian Organization Indirect Cost Negotiation Agreement

EIN: 91-0434170

Date: 01/21/2022

Organization:

Swinomish Indian Tribal Community
11404 Moorage Way
LaConner, WA 98257

Report Number: 2021-0803

Filing Ref:

Last Negotiation Agreement
dated: 10/23/2020

The indirect cost rate contained herein is for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and 2 CFR Part 200 apply subject to the limitations contained in 25 CFR 900 and Section II.A. of this agreement. The rate was negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in applicable regulations.

Section I: Rate

Start Date	End Date	Rate Type					
01/01/2022	12/31/2022	Fixed Carry forward	Name	Rate	Base	Location	Applicable To
			Indirect	29.75 %	(A)	All	All Programs

(A) Base: Total direct salaries and wages, including fringe benefits. The rate applies to all programs administered by the Tribe. To determine the amount of indirect costs to be billed under this agreement, direct salaries and wages and related fringe benefits should be summed and multiplied by the rate. All other program costs should be eliminated from the calculation.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Section II: General

- A. **Limitations:** Use of the rate(s) contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate(s) agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).
- B. **Audit:** All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.
- C. **Changes:** The rate(s) contained in this agreement are based on the accounting system in effect at the time the proposal was submitted. Changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate(s) in this agreement may require the prior approval of the cognizant agency. Failure to obtain such approval may result in subsequent audit disallowance.
- D. **Rate Type:**
1. **Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to the rate for a future period, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.
 2. **Provisional/Final Rate:** Within six (6) months after year end, a final indirect cost rate proposal must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.
 3. **Predetermined Rate:** A predetermined rate is an indirect cost rate applicable to a specified current or future period, usually the organization's fiscal year. The rate is based on an estimate of the costs to be incurred during the period. A predetermined rate is not subject to adjustment.
- E. **Rate Extension:** Only final and predetermined rates may be eligible for consideration of rate extensions. Requests for rate extensions of a current rate will be reviewed on a case-by-case basis. If an extension is granted, the non-Federal entity may not request a rate review until the extension period ends. In the last year of a rate extension period, the non-Federal entity must submit a new rate proposal for the next fiscal period.
- F. **Agency Notification:** Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.
- G. **Record Keeping:** Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.
- H. **Reimbursement Ceilings:** Grantee/contractor program agreements providing for ceilings on indirect cost rates or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.
- I. **Use of Other Rates:** If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the

Section II: General (continued)

affected programs, and the approved rate(s) should be used to identify the maximum amount of indirect cost allocable to these programs.

J. Other:

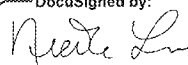
1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.
2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate(s) if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.
3. Each Indian tribal government desiring reimbursement of indirect costs must submit its indirect cost proposal to our office within six (6) months after the close of the Tribe's fiscal year, unless an exception is approved.

Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the Indian Organization

Swinomish Indian Tribal Community

DocuSigned by:

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Signature

Nicole Lewis

Name:

Chief Financial Officer

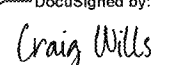
Title:

2/3/2022

Date

By the Cognizant Federal Government Agency

US Department of the Interior - BIA

DocuSigned by:

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Signature

Craig Wills

Name:

Division Chief
Indirect Cost Services Division
Interior Business Center

Title:

1/23/2022

Date

Negotiated by: Michael Dellwo
Telephone: (916) 930-3818

Next Proposal Due Date: 06/30/2022

Project Title:

Enhancing Swinomish Air Quality Monitoring of SO₂ and H₂S and Community Response & Engagement to Hazardous Gas Releases

Applicant Information:

Department of Environmental Protection
Swinomish Indian Tribal Community
11430 Moorage Way
La Conner, WA 98257
Phone: (360) 708-3118
Principal Contact: Kelsey Larson, Air Quality Specialist - Swinomish Air Quality Program
Principal Contact Email: klarson@swinomish.nsn.us
Website: www.swinomish-nsn.gov
DUNS Number: 079256194

Set-Aside:

Tribal Set-Aside

Eligible Entity:

The Swinomish Indian Tribal Community is a federally recognized Indian tribal government organized pursuant to Section 16 of the Indian Reorganization Act of 1934 (25 U.S.C. § 5123). The Department of Environmental Protection's mission is to protect and restore the natural environment, and the health and welfare of the Swinomish Indian Tribal Community for present and future generations. The Department of Environmental Protection's Air Quality Program currently operates under a Clean Air Act 105 Grant to monitor Ozone, NO/NO₂, and Hazardous Air Pollutants as well as replacing marine diesel engine through EPA's DERA grant program and providing technical assistance in response to the COVID-19 pandemic regarding indoor air filtration.

Project Location:

La Conner, Skagit County, WA

Air Pollution Scope:

SO₂ and H₂S (primarily) as well as PM_{2.5}, NO₂, and O₃

Budget Summary:

EPA Funding Requested	Total Project Cost
\$304,077	\$304,077

Project Period:

1/1/2023 – 12/31/2025

Short Project Description:

Purchase one (1) 450iQ from Thermo Fisher Scientific and associated equipment required for calibration (i.e. standard gases, regulators, etc.). Install equipment and supplies at two (2) stations allowing for the non-regulatory monitoring of SO₂, H₂S, and PM_{2.5} with visibility as well as monitoring atmospheric stability at three (3) stations. Contract with Campbell Scientific to develop a Data Acquisition System (DAS) that collects the weather, particulate, and gaseous concentrations but also implements automated QA/QC, zero/span, multipoint checks on gas monitors. Develop QAPP and SOPs for ensuring QA/QC of new monitoring. Solicit and consider the needs of the public and emergency responders to create a dual-sided website with real-time weather and AQ monitoring data for these two distinct consumers to make informed decisions on personal and public safety, respectively.

Section 1. Project Summary and Approach

A. Overall Project

Swinomish Indian Tribal Community (SITC) is seeking to expand its monitoring capacity of Criteria Air Pollutants (CAPs), Hazardous Air Pollutants (HAPs), and meteorological observations to enhance SITC's ability to respond to releases of unknown gaseous mixtures by nearby Title V sources. The expansion of CAPs monitoring would include restarting and expanding monitoring of sulfur dioxide (SO₂) (non-FEM) and particulate matter with a diameter less than 2.5 microns (PM_{2.5}) (FEM, non-regulatory) to add to our current monitoring of nitrogen dioxide (NO₂) and ozone (O₃) (both regulatory). The expansion of HAPs monitoring would include continuous monitoring of hydrogen sulfide (H₂S) to add to our discrete sampling of 75 different VOCs via EPA's Method TO-15. In addition, SITC would enhance our current meteorological monitoring by adding 10-meter temperature to determine surface layer stability and purchase a camera to monitor visible emissions from the refinery flares and stacks. SITC would then work with a contractor (Campbell Scientific) to create a Data Acquisition System (DAS) to assist in data management and QA/QC procedures. Finally, SITC would work with the same contractor to build a website that interacts with the DAS and create two separate web pages: 1) general information for public consumption and 2) more detailed website with ability to add warnings to general page only available to emergency response personnel.

Thus, this project will consist of the following phases: 1) Procurement, 2) Installation, 3) Data Acquisition System Development, 4) Website Development, and finally, 5) SOP/QAPP development. These are further outlined below:

A-1. Procurement

For this project, SITC will purchase the following equipment with this grant application: One (1) 450Q (SO₂ and H₂S Monitor) from Thermo Fisher Scientific; supplies required for calibration of the 450iQ (standard gases, cylinder rentals, regulators); five (5) Vaisala temperature probes – three (3) for characterizing boundary layer stability (HygroVUE10) and two (2) to monitor temperature and relative humidity within the shelters (HygroVUE5) that house CAPs monitors (per Operational Criteria listed in QA Handbook Volume II, Appendix D for O₃, NO₂, SO₂, and PM_{2.5}); two (2) cameras to monitor visibility of emissions from the refineries at the shelters that house CAPs monitors.

SITC will also accept \$82,000 of Direct ARP funds to purchase additional equipment only. This equipment includes: one (1) 450iQ (SAQMS1 to replace old SO₂ monitor), one (1) multi-gas calibrator (MGC) with photometer (SAQMS1, replace old calibrator), two (2) Zero Air Generators (ZAG) and associated supplies for all instruments listed above. The installation and creation of a DAS to manage data collection and data quality control is foundational to building a robust and QA/QC'd emergency response system to releases from nearby Title V sources.

A-2. Installation

At the near-source station (Swinomish Air Quality Monitoring Station #1 or SAQMS1 - see Figure 1), one (1) Vaisala HygroVUE10 probe will be installed on the existing tower at a height of ten (10) meters and one Vaisala HygroVUE5 will be installed inside to monitor shelter conditions. A camera will be installed on the roof of the station to monitor the emissions from the refinery and transportation of petroleum (trains and ships). In addition, the current ZAG will be replaced and one (1) 450iQ installed. SITC is currently in the process of installing a PM_{2.5} flange to set up one (1) 5030i SHARP (FEM PM_{2.5} Monitor donated to and in possession of Swinomish).

SITC is currently has funds set aside and is in the process of identifying a location for and building a new

station (SAQMS5) within the Swinomish Village Area (see Figure 1). Construction of this new station is estimated to be completed by the end of 2022. This station is to replace SAQMS3 as that location has minor sources of NO_x that are within any reasonable placement of an ozone inlet for enforcement of the NAAQS. Since realizing this in late 2019, our Thermo Fisher 49i ozone analyzer was moved to SAQMS1 until a replacement SAQMS could be built. At this new station, the 49i, the new multi-gas calibrator (MGC), one (1) ZAG, one (1) 450iQ and one (1) 5030i SHARP will be installed. The station will be built with the PM_{2.5} flange before 2023. One (1) Vaisala HygroVUE10 probe will be installed on the tower (moved from SAQMS3) at a height of 10 meters and one Vaisala HygroVUE5 will be installed inside to monitor shelter conditions. A camera will be installed on the roof of the station to monitor visibility in the Village.

At SAQMS4 (see Figure 1), one (1) Vaisala HygroVUE10 probe will be installed on the existing tower at a height of ten (10) meters.

A-3. Data Acquisition System Development

After setting up the instruments, SITC will contract with Campbell Scientific to program a Data Acquisition System (DAS) utilizing existing Campbell Scientific CR1000 (two) and CR1000X (one) dataloggers. At each station, the DAS will collect data from a full weather station (anemometer, thermo hygrometer, barometer, pyranometer, precipitation gauge), gaseous monitors, and particulate monitors at 5-minute intervals. For gaseous and particulate monitors, the DAS will also ingest instrument status variables (ex. lamp intensity, reaction cell pressure, bench temperature) and create data flags saved with the 5-minute interval data. For weather instruments, a separate “audit logger” (Campbell Scientific CR800) will be programmed to control the “station loggers” to perform comparisons of the station monitors against NIST-traceable weather standards. For gas monitors, the DAS will trigger the MGC and ZAG to perform automated QA checks, zero/span, and multipoint checks on a set schedule (3 days, 3 days, and 1 per quarter, respectively), save QA check, zero/span, and multipoint check results with a calculated %CV, and automate retry if the monitors fail to pass in addition to notifying AQ Program staff. For particulate monitors, the DAS will be set up to collect a separate table for collecting QA check, zero/span, multipoint, and flow check results that can be triggered by AQ Program staff manually. Finally, the DAS will be built with data export capabilities to Institute for Tribal Environmental Professional’s (ITEP) Quality Review and Exchange System for Tribes (QREST). QREST is an open source database designed for Tribal AQ programs to screen and export Data to the EPA’s Air Quality System (AQS) for the enforcement of the NAAQS.

In order to ensure that this DAS meets our needs, Campbell Scientific will send out DAS experts to our field sites before creating the programming. They will be able to access dataloggers remotely to set up most of the DAS and complete some troubleshooting. They will then return to test the system after completion to ensure the DAS meets our needs and is working properly.

A-4. Website Development

For this specific project, SITC’s DEP will work with established partners both within SITC and external community organizations on Reservation to ensure the best broadcasting of information to two distinct consumers: general community members and emergency responders. Before building the website, AQ Program staff will create a survey for public consumers to solicit input from the public. AQ Program staff will solicit input from select emergency personnel directly by meeting with SITC’s Emergency Manager, Swinomish Police, Swinomish Health Clinic, and Fire District 13. After creating a working page, AQ Program staff will return to those who completed the first survey to beta-test the website to ensure ease of use and the needs of the users are met. Finally, we will work with our community partners to advertise the public website as well as advertising through local media (Tribal newspaper, La Conner newspaper, Newsletters, etc.) and host a training for any/all emergency personnel to familiarize staff on the new tool, distribute a

Standard Operating Procedure (SOP) for utilizing the website, and ensure they have access.

A-5. SOP/QAPP development

As the 450iQ and 5030i are new instruments to the SITC AQ Program, before, during, and after installation the AQ program staff will develop, test, revise, and document any and all procedures to create Standard Operating Procedures (SOPs). In addition, the AQ program staff will work closely with the DAS contractors to document any and all procedures to best utilize the DAS and create a separate SOP for the DAS. This will be done with the goal of having an on-file Quality Assurance Project Plan (QAPP) for these new monitoring systems by the end of 2025. AQ Program staff will also create an SOP for the use of the website by Emergency Personnel as stated in Section A-4.

B. Project Significance

The Swinomish Reservation is located within two (2) miles of two (2) petroleum refineries, one (1) natural gas producer, and associated chemical production industries. Due to accidental releases or negligence during operation of these sources, the Swinomish community is exposed to releases of unknown gaseous mixtures with limited warning. In February of 2015, failures in the refinery flare system led to five (5) hospitalizations, twelve (12) medical visits, twenty-six (26) reports of symptoms lasting more than 24 hours. In total, 176 members created written accounts of the incident describing health impacts. The Northwest Clean Air Agency (NWCAA) issued a Notice of Violation in 2016 to Shell for not following shutdown and decontamination procedures during flare cleaning. While action was taken due to safety procedures not being followed, these actions were not taken based on the concentration of air pollutants emitted. As the EPA noted in a letter to the Tribe on 11/4/2020: “[...] or None of the individual chemicals released on that day were above the reportable quantity based on Shell’s calculations. We have no information to indicate those calculations were incorrect.” In order to address this gap in monitoring and address the community’s demand for more information, SITC partnered with Oregon State University to investigate polyaromatic hydrocarbons using particulate filters. In addition, the AQ Program instituted discrete sampling of HAPs using EPA’s Method TO-15.

In September 2020, another release event occurred causing SITC to respond with a shelter-in-place order. When the La Conner school day ended during the shelter-in-place order, emergency personnel asked the AQ Program staff if it was safe enough to send the students home. The AQ Program’s discrete sampling was not useful in this situation as samples are required to be sent off for analysis. We do not currently have instantaneous measurement capabilities of common compounds found in fossil fuel processing Title V sources in the most populous region of the Reservation. We later determined that a grab sample taken at SAQMS1 contained 16 ppbv of carbonyl sulfide, indicating reduced sulfur compounds in the plume. Currently, the SO₂ and H₂S monitors administered by the NWCAA are located to the west of March Point in Anacortes at 202 Ave and Bartholomew Road (Figure 1). We requested the assistance of EPA Region 10 modeler Jerrold McAlpine to better understand this event using the American Meteorological Society/Environmental Protection Agency Regulatory (AERMOD) Model. Dr. McAlpine used wind data from SAQMS1 and SAQMS4 to model emission of one (1) gram/second at three (3) seventy-five (75)-meter high flares over three (3) hours on 9/29/2020. The AERMOD results – shown in Figure 1 – indicate the Bartholomew road site was not within the most likely least diluted regions of the plume. This is in line with NWCAA’s monitoring staff observing that H₂S and SO₂ were not majorly elevated. In addition, the model indicates that SAQMS1 is situated to best capture near-source concentrations in comparison. The direct ARP funds will allow for a near-source SO₂ and H₂S monitor; however, this will not allow for detection of the plume in the most populated areas of the reservation – the south. Thus, SITC is requesting funds to purchase an additional 450iQ in this grant application to ensure we can detect the plume in the most populated part of the Reservation.

As elevated sulfur and PM_{2.5} are indicative of a large fossil fuel-based point source, having access to real-time concentrations at SAQMS1 and along with a new station in the Swinomish Village area would allow emergency responders to make more informed decisions about public safety. For example, even if the sulfur or PM_{2.5} concentrations are not at dangerous levels, a plume would most likely show these compounds above background. In addition, the public themselves could have real-time access to monitoring of air pollutants in their area that not only would benefit their ability to assess risks during a refinery event, but also during other AQ-related events such as wildfire smoke or high-ozone summer events.

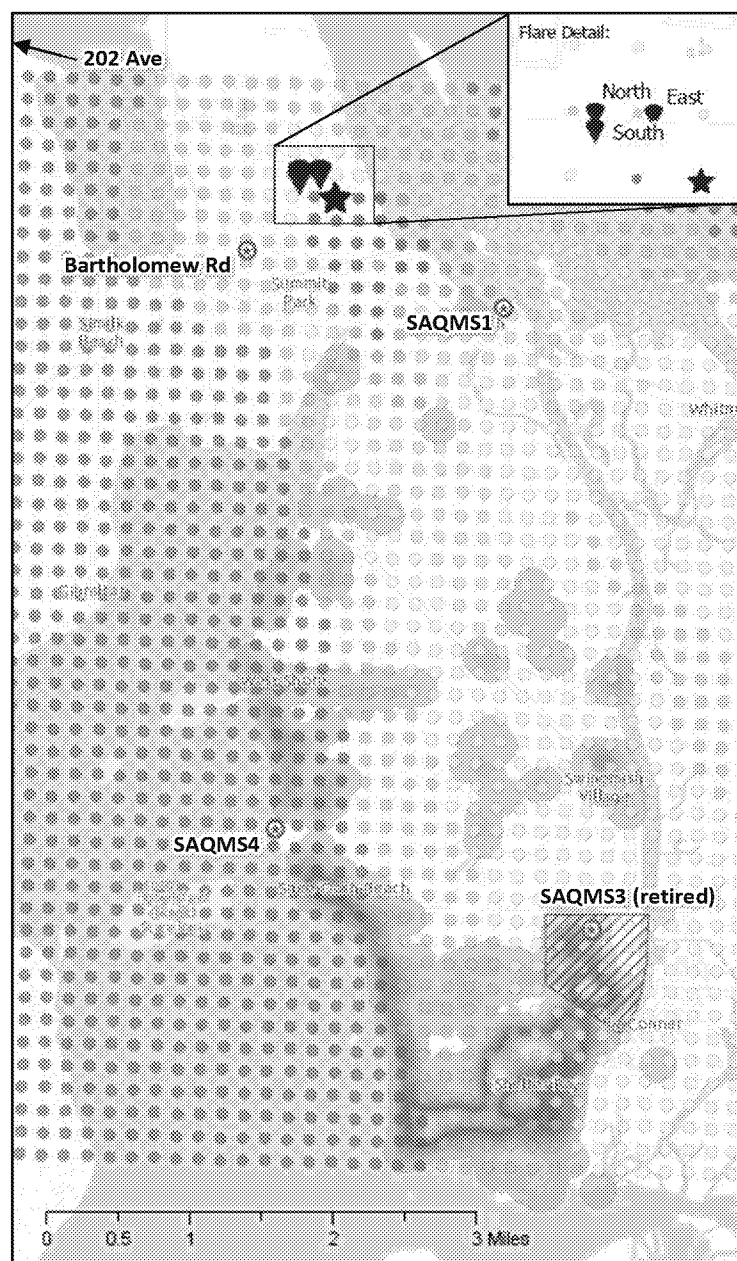
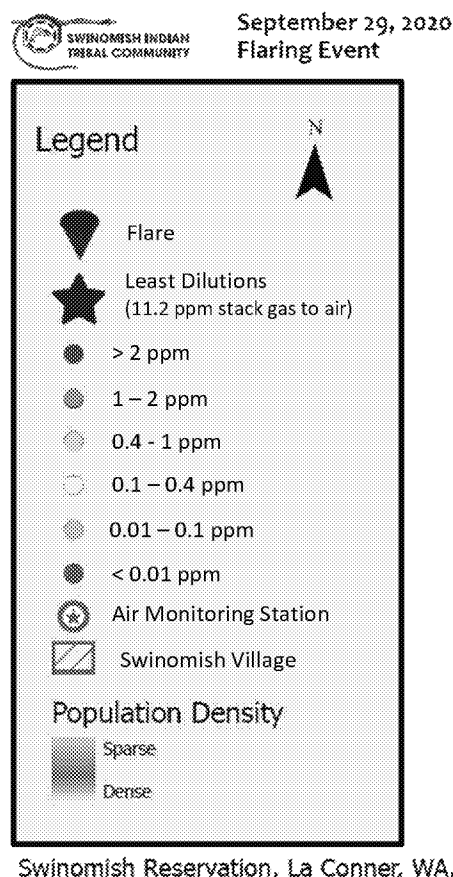


Figure 1: AERMOD Results for the 9/29/2020 event. The dilution of stack air at the surface is indicated by the colored dots. The unit of dilution is X parts of stack air to one million parts of air. In addition to the AERMOD results, the population density on the Reservation is indicated with a heat map. The location of the NWCAA stations along with Swinomish AQ Monitoring Stations are marked.



Swinomish Reservation, La Conner, WA.

The Swinomish Indian Tribal Community makes no claim as to the completeness, accuracy, or content of any data contained herein. This map is not intended to reflect the exterior boundaries of the Swinomish Indian Reservation. No part of this document may be reproduced without prior permission of the Swinomish Indian Tribal Community. FlareEventSwinomish.aspx, hhetich, 2/28/2022.

Section 2. Community Involvement

A. Community Engagement

To ensure a website that provides real-time weather and AQ monitoring that fulfills the needs of the

community, the AQ program will work with community members within and external to SITC. The AQ Program will work within the Swinomish community by soliciting information from SITC government employees and Swinomish Tribal Members through email, *qyuus* (local SITC newspaper), and SITC's text messaging system. To reach the greater Reservation community, AQ Program Staff will post the survey on the Swinomish website and advertise the survey in the *La Conner Weekly News* in addition to working with the Shelter Bay community (housing association of 900 plots) to reach non-Tribal Reservation residents. After completion of a preliminary website, the AQ Program will return to these same partners and request if they can try out the website and provide feedback. After we have finalized the website, AQ Program staff will use the same methods used to recruit community members to advertise the finished website. We will also include signs on our monitoring stations that point visitors using the two RV/camping parks near SAQMS1 and SAQMS4 to the AQ public website.

In order to best design a tailored emergency responder website, AQ Program staff will solicit input from select emergency personnel directly by meeting with SITC's Emergency Manager, Swinomish Police Chief, and Swinomish Health Clinic Administration. To ensure non-SITC emergency responders are included, AQ Program staff will partner with Fire District 13 (see Section 2 B-1) and reach out to the NWCAA to discuss creating a Memorandum of Understanding (MOU). This MOU would ensure data sharing for regulatory actions the NWCAA may take. In that discussion, we'd work with the NWCAA to identify possible needs the regulatory agency would have during such an event. After the completion of the emergency responder website, we would reach out to all emergency responders on Reservation to ensure they have access and host a training. The AQ Program staff will create an SOP for use of the emergency responder portion of the website.

B. Community Partnerships

The main thrust of our community partnerships is to ensure that emergency responders are served by the creation of an AQ and weather data website. To ensure non-SITC emergency personnel have the most relevant information to respond to a release of hazardous gases or other AQ emergency response events, SITC will be partnering with Fire District 13 (see letter, Attachment 1). Fire District 13 (FD13) includes the entire Reservation under its jurisdiction as well the area around La Conner all the way up to parts of March's Point (where the refineries are). FD13 has committed to assisting in collecting their needs as emergency responders for a weather and AQ website. After a workable version is available, FD13 will ask firefighters to beta-test the website and then attend a training with the finalized version. By working with FD13, SITC will best arm our emergency responders with the tools they need to make informed decisions and FD13 will make sure their needs are met. We anticipate that when the website is revised or major changes to staffing occur, SITC will notify FD13 and hold trainings on request of FD13.

Section 3. Environmental Justice and Underserved Communities

The Swinomish Indian Tribal Community is exposed to varied environmental hazards. From the EPA's EJSCREEN tool, the Reservation (Swinomish Reservation Boundaries) ranks above the 70th percentile in EPA Region 10 for proximity to traffic as well as above the 50th percentile for PM_{2.5} (54th), ozone (55th), 2017 Air Toxics Cancer Risk (55th), 2017 Air Respiratory HI (54th), diesel PM_{2.5} (50th), as well as Risk Management Plan (RMP) facility proximity (57th) if we specifically focus on a circle centered on the Swinomish Village within a 1-mile radius.

While the number of RMP facilities within five (5) kilometers is on par with the mean (47th) percentile for the entire US, the RMP facilities include two of the five refineries in the State of Washington. In the past three (3) years, the EPA recorded six (6) separate CAA violations by Shell (now Holly Frontier) and Andeavor facilities: 2019 Q2 (Andeavor) and 2019 Q4, 2020 Q1 & Q3, and 2021 Q1 & Q4 (Shell). The refineries are not only the largest emitters in the area of NOx, VOCs, and CO but also receive transport of petroleum by truck (from two thoroughfares) and rail that pass through Reservation boundaries. The refinery also docks large marine vessels

transporting petroleum from British Columbia and is near some of the most highly trafficked marine areas in the United States. Swinomish is lucky to be in a rather rural area and thus doesn't have the same baseline pollution level as urban centers; however, unknown mixtures of CAPs and HAPs released from nearby sources create acutely hazardous air quality conditions that disproportionately affect the elderly and other sensitive groups over short time periods.

In addition to ambient air pollutants from the refinery, the use of lead-based paint and asbestos continued on the Reservation well into a decade after those materials were banned in the United States. Poor building designs like bathroom fans venting into attics or cheap plastic insulation have led to mold growth in Tribal homes, resulting in poor indoor air quality. This remains a serious issue in most tribal homes to this day. With the median annual income for American Indian/Alaska Native households being \$42,159 compared to a median annual income of \$73,056 for other households in the area (2010 Census), addressing indoor health exposures or investing in upgrading household filtration is financially straining.

In addition to the history of poor housing, Tribal members have a higher than normal incidence of respiratory diseases and problems, such as from asthma and allergens (source: Swinomish Climate Change Initiative). The Swinomish Medical Clinic reports that respiratory distress is one of the top three reasons ambulances are called to the Reservation. The COVID-19 pandemic was thus an additional burden to the SITC community with the prevalence of pre-existing conditions. In addition, the pandemic made it difficult to respond to AQ emergencies such as the refinery emission events or wildfire smoke events. As Tribal homes have indoor air quality issues that compound external AQ issues, thus SITC's planned solution pre-pandemic was to create communal places with filtration; however, with the pandemic, this solution became unsafe for those who most needed relief as communal solutions came with the possibility of catching COVID-19.

Section 4. Environmental Results

A. Outputs and Outcomes

Specific project outputs and outcomes have been developed to measure the project's success. These are shown along with project activities in Table 3.

Table 1. Project Activities, Outputs and Outcomes

<i>Anticipated Outputs & Outcomes</i>		
Activities	Outputs	Outcomes
Procurement of equipment and supplies following SITC procurement procedures	Multiple quotes from different manufacturers	Reduce equipment and supply cost for the EPA by searching for alternative prices
Installation of non-FRM/FEM sulfur monitors and associated calibration equipment at SAQMS1 and SAQMS5	Time series of SO ₂ and H ₂ S at two (2) locations	Determine plume location from elevated sulfur compounds in the atmosphere in event of another hazardous release from the nearby Title V sources
Installation of FEM PM _{2.5} monitors at SAQMS5	Time series of PM _{2.5} at one (1) locations	Determine plume location from elevated particulates in the atmosphere in event of another hazardous release from the nearby Title V sources
Installation of T/RH probes at 10m at SAQMS1, SAQMS4, and SAQMS5	Time series of 10m temperature and relative humidity at three (3) locations	Determine stability of the atmosphere near the surface
Installation of cameras at SAQMS1 and SAQMS5	Recording of source activity and visibility	Determination if sources are currently (or were) emitting

Scope of Work and contract developed between SITC and DAS contractor	Senate- or Committee-approved executable contract	Ensure scope of work is detailed and work performed in a timely manner
Initial visit by DAS contractors	Timeline and plan for programming and delivery of DAS	Ensure DAS contractors have necessary information to write DAS programming for SITC-owned dataloggers
DAS installation at SAQMS1, SAQMS4, and SAQMS5 by contractor	Datalogger programming at three (3) locations as well as one (1) weather audit logger	Time series of weather, ambient gas and particulate concentrations are saved in 5-minute intervals with QA/QC flags Automated QA/QCs of gas monitors for minimal data loss. Weather QC checks require less staff time PM _{2.5} QA/QC data is recorded by logger Interface DAS with QREST for reporting to AQS
Survey community and emergency responders	Compiled list of needs from community and emergency responders for an AQ and weather data viewing website	Ensure community and emergency responders' needs are met by website containing AQ and weather data.
Purchase Campbell Cloud services and website development	Public and emergency responder website creation	Community can view our weather and AQ data in real-time; include calculation of AQI and banners if notifications needed (like "Wildfire smoke: Unhealthy") Emergency responders are able to view weather and AQ trends, add banners to the public website, and use this information to make informed decisions

B. Performance Measures and Plan

B-1. Procurement

The Air Quality Specialist (AQSp) and the Air Quality Technicians (AQTs) will oversee and complete the procurement of the listed equipment. The performance measures used to track completion will be composed of two major pieces: 1) when agreement is entered in SITC's internal accounting system, 2) the percentage of equipment purchased and percentage of supplies purchased. The 100% completion of equipment and supplies is a milestone; the timeline of which is shown in Table 2 (Section 4 Part C).

B-2. Installation

The AQSp and AQTs will oversee and complete the installation of equipment and supplies at SAQMS1, SAQMS4, and SAQMS5. The AQSp and AQTs will record any and all installation work in LabArchives (e-logbook service) per SITC's LabArchives SOP. The performance measures to track completion will be based on the location and type of data – for example, we'd track the installation of three T/RH sensors as 33% complete when only one station has a 10-meter T/RH sensor and 100% complete when all three stations have a 10-meter T/RH sensor installed physically at the site. The timeline for installation of all equipment and instruments listed is shown in Table 2.

B-3. DAS Development

The AQSp and DAS contractors will be the main staff responsible for the completion of the DAS. The main measures for tracking the DAS development will be the following: 1) create a scope of work, 2) create a SITC

committee-approved contract, 3) DAS contractor staff will make initial visit and walk through current set-up led by AQSp and AQTs, 4) DAS Contractor will develop coding for DAS while AQ program staff tweak installation based on DAS Contractor recommendations, and finally 5) DAS contractors will return to SITC, install the DAS, and ensure the DAS is working properly. The timeline and completion of the numbered milestone are shown in Table 2.

B-4. SOP/QAPP Development

The AQSp and AQTs will be the main staff responsible for development of SOPs and a QAPP. The main measures for tracking SOP and QAPP development will be: 1) draft SOP for the procedures for QA/QCing new instruments, 2) draft SOP for the use of the completed DAS, 3) final drafts of these aforementioned SOPs, 4) draft SOP on emergency responder website 5) finalization of non-regulatory monitoring of SO₂, H₂S, and PM_{2.5} QAPP including finalization of all SOPs. The timeline and completion of the numbered milestones are shown in Table 2.

B-5. Website Development

The AQSp will oversee website development and AQT staff will oversee collection of community feedback. The main measures for tracking website completion will be the completion of the different phases: 1) initial solicitation of community and emergency personnel, 2) translating collection of needs and creating Scope of Work for website creation, 3) beta-testing the website and soliciting feedback, and finally 4) advertising the finished product and holding trainings. As the data collected and displayed on the website will be utilized to make decisions, a complete QAPP will be on file for all data posted to the website before the website goes live for the public or emergency responders.

C. Timeline and Milestones

The project will be completed in 36 months (January 1st, 2022 to December 31th, 2025). The project timeline is shown in Table 2.

Table 2. Project Timeline

	2023												2024												2025												2026
Task	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J/F/M
1. Procurement		1							>																												
2. Instrument Installation											>																										
3. DAS Set-Up									1		2	3		4							5	>															
4. SOP/QAPP Development														1				2				3					4					5	>				
5. Website Development												1	2														3								4	>	
6. Reporting			x			x			x		X		x		x		x		x		X		x		x		x		x		x		x		XX		

= Milestones > = Completion x = Quarterly Report X = Annual Report XX = Final Report

Section 5. Quality Assurance Statements

SITC is committed to ensuring Quality Assurance and developing, documenting, and instituting Quality Control on any and all air quality or weather data collected by the Swinomish Department of Environmental Protection. More detailed information can be found in Attachment 2.

Section 6. Programmatic Capability and Past Performance

A. PAST PERFORMANCE & REPORTING REQUIREMENTS

(Table on next page)

Table 3: List of federally funded assistance agreements performed by Swinomish in the past 3 years

Title	Assistance Agreement	Funding Agency CFDA #
Swinomish PPG	00J53403 (CY21-24, current)	66.605
Swinomish EPA CAA (105)	01J43101 (CY19-20) 01J71301 (CY21-22, current)	66.001
Marine Engine Repower and Fish Plant Shore Power Project (DERA)	01J62301 (2019-22, current) 01J88501 (2020-22, current)	66.039

Swinomish EPA CAA (105): SITC has successfully managed and completed our agreement by completing work plan tasks and obligations and submitting approved reports. Progress on program output and outcomes are reported to EPA on a quarterly basis and summarized in annual and final reports.

Swinomish PPG: SITC successfully managed and completed our agreement through meeting work plan obligations and submitting an approved final report. Program progress on developing outputs and meeting outcomes was reported to EPA on a semi-annual basis and summarized in the final report.

Marine Engine Repower and Fish Plant Shore Power Project: SITC continues demonstrating effective project management, reporting, and completion of each award/contract over the past five years. Program progress on developing outputs and meeting outcomes was reported to EPA on a quarterly basis and will be summarized in a final report.

B. Reporting Requirements

For all three agreements listed in Section 6 Part A, SITC has remained in contact with EPA management staff, delivered quarterly reports on time, and submitted annual reports as needed. We consistently deliver acceptable annual data reports on our CAA 105 program. Progress on the listed DERA grants has been more difficult with the pandemic and increasing costs. We have worked closely with our grant managers at EPA to determine if no-cost extensions were needed to complete the work and requested when applicable.

C. Staff Expertise

Kelsey Larson, the AQSp, is a FT employee of almost four (4) years who manages the Tribe's 105 Air program. Her background includes undergraduate research in ambient air quality monitoring of SO₂ and O₃ and forecasting for sampling of vertical profiles. For her Master's in Atmospheric Science at the University of Washington, Ms. Larson assisted in the 2015 Wintertime INvestigation of Transport, Emissions, and Reactivity (WINTER) by conducting hind-casts for source determination. Ms. Larson is the grant manager for the AQ program and is responsible for budgeting, contract development, oversight of the AQTs, and producing quarterly and annual reports. (See Ms. Larson's CV in Attachment 3)

Caitlin Roberts, the AQT2, is a FT employee of almost three (3) years in the 105 Air Program. Her background includes a Masters of Environmental Science where her studies focus more on oceanography and ocean acidification. Ms. Roberts is the lead field technician and thus is in charge of day-to-day field sampling and maintenance along with procurement

Julian Silva, the AQT1, is a recent FT employee in the 105 Air Program. His background includes a BS in chemical engineering. Mr. Silva is the support field technician and thus supports day-to-day field sampling, maintenance, and data entry.

Section 7. Budget

A. BUDGET DETAILS

(Table on next page)

Line Item and Itemized Cost							EPA Funding
	2023		2024		2025		
Personnel	FTE	TOTAL	FTE	TOTAL	FTE	TOTAL	
	Salary		Salary		Salary		
Air Quality Specialist	0.3	\$21,216	0.3	\$21,853	0.3	\$22,508	\$65,577
	\$34.00		\$35.02		\$36.07		
Air Quality Technician 2	0.2	\$9,529	0.2	\$9,815	0.2	\$10,109	\$29,453
	\$22.91		\$23.59		\$24.30		
Air Quality Technician 1	0.2	\$7,713	0.2	\$7,944	0.2	\$8,182	\$23,839
	\$18.54		\$19.10		\$19.67		
TOTAL PERSONNEL							\$118,869
Fringe Benefits							
41.7% of Salary and Wages fir FICA, Annual Leave, Workman’s Comp, Health, Retirement							
TOTAL FRINGE BENEFITS							\$49,568
Equipment							
One (1) ThermoFisher Scientific 450iQ (@ \$23,000 each)							\$23,000
TOTAL EQUIPMENT							\$23,000
Supplies							
Four (4) Corrosive Gas Dual Stage Regulators (@ \$1500 each)							\$6,000
Four (4) supply gases - Two (2) Sulfur Dioxide and Two (2) Hydrogen Sulfide (@ \$300 each)							\$1,200
Two (2) Temperature & Relative Humidity Vaisala HygroVUE5 (\$350 each)							\$700
Three (3) Temperature & Relative Humidity Vaisala HygroVUE10 (\$550 each)							\$1,650
Three (3) Tower Mounting poles for HygroVUE10 (\$125 each)							\$375
Three (3) HygroVUE10 Radiation Shield (\$200 each)							\$600
Two (2) CCFC Camera with Ethernet Chord option (\$4000 each)							\$8,000
TOTAL SUPLIES							\$18,525
Contractual							
Three (3) Campbell Cloud Subscription for One (1) Year for Three (3) Stations (\$600/Station/Year)							\$5,400
Campbell Scientific Programming of Four (4) Dataloggers							\$8,000
Servicing and Troubleshooting of Dataloggers at 3 Sites (2 visits)							\$27,005
Three (3) Years of Praxair Cylinder Rental (4 @ \$300/year)							\$3,600
TOTAL CONTRACTUAL							\$44,005
Indirect Charges	2023		2024		2025		
Yearly Indirect Costs	29.75%	\$16,212	29.75%	\$16,698	29.75%	\$17,200	\$50,110
TOTAL INDIRECT							\$50,110
TOTAL FUNDING							\$304,077
TOTAL PROJECT COST							\$304,077

B. Reasonableness of Cost**B-1. Personnel**

Ms. Larson, Air Quality Specialist, is budgeted for 0.3 FTE for all years to cover project management, project planning and tracking, contract development, website development, and SOP/QAPP writing. Ms. Roberts, Air

Quality Tech 2, is budgeted for 0.2 FTE for all years to cover SOP/QAPP writing, procurement, installation and troubleshooting activities. Mr. Silva, Air Quality Tech 1, is budgeted for 0.2 FTE for all years to cover community surveying, installation, and troubleshooting activities. SITC routinely gives a 3% COLA for FT staff which is included in the Budget Details under Personnel. Total for each Year is calculated using the FTE for that year and the hourly salary of that staff. $TOTAL\ PERSONNEL_{year} = FTE_{year} * 40\ hours * 52\ weeks * Salary_{year}$ where FTE_{year} and $Salary_{year}$ are shown in the table.

B-2. Fringe Benefits

The fringe rate is 41.7% of salaries for all staff on this project. Fringe benefits include FICA 7.72%, accrued annual leave 7.22%, Workman's Compensation 0.75%, health and life insurance 23.45%, retirement benefits 2.37%, employee assistance program 0.08% and P/R taxes (0.42%).

B-3. Equipment

Equipment costs for the 450iQ is based on quotes from ThermoFisher Scientific. The 450iQ for SAQMS5 is essential to adding real-time SO₂ and H₂S concentrations in the most populous region of the Reservation.

B-4. Supplies

Supplies to ensure AQ program can implement QA/QC procedures on the 450iQ are at least one (1) cylinder of SO₂ and one (1) cylinder of H₂S. The second set of cylinders listed is for external auditing of gas monitors annually. The listed regulators are for these four (4) cylinders. T/RH sensors, mounting equipment, and cameras listed are quoted from Campbell Scientific. The T/RH sensors installed at 10-meter are essential for calculating stability at the surface as inversion conditions will amplify impacts from releases. The T/RH sensor for internal shelter monitoring are essential to ensure our SAQMSs are meeting operational criteria for all gas and particulate monitors. The cameras are to monitor visibility and give emergency personnel eyes on the refineries during an emission event.

B-5. Contractual

Contractual costs include rental of the aforementioned cylinders in addition to the annual website cost that directly interacts with the Campbell Scientific dataloggers for 3 years are each station. For the development of the DAS, generally Campbell Scientific would request instruments be sent to their location in Logan Utah; however, reducing possible instrument issues from travel damage is paramount for our regulatory data monitors. Instead, they can complete a site visit (quoted at \$13,410) for five (5) days to inspect the instruments and site set up. The programming for the DAS would be completed remotely and the quote of \$8,000 is determined from an hourly rate of approximately \$180/hour and total hours based on an outline of this project. The DAS creators would then return to deliver the DAS pieces that can't be done remotely and test that the DAS is properly working (quoted at \$13,595) for another five (5) days. Working with DAS experts will decrease overall costs as the development of a DAS within SITC would require significant staff resources.

B-6. Indirect Charges

The Tribe's approved 2022 Indirect Cost Rate is 29.75%. See Attachment 4 for a copy of the approved rates.

C. Expenditure of Awarded Grant Funds

To ensure grant funds are expended in a timely manner, a draft "Scope of Work" has already been completed for the DAS development so contract development can commence within the first year. AQ Program staff will be in close contact with any and all distributors to plan installation work based on when equipment and supplies can be delivered as issues with supply line from COVID-19 are ongoing. Accordingly, the AQ Program staff will make every reasonable effort to ensure purchase of equipment and supplies are completed within the first year of the award.